

## **What is claimed is:**

**[Claim 1]** 1. A device for monitoring an user's blood pressure, the device comprising:  
a motion sensor for monitoring localized motion of the user;  
a vital-sign monitor for monitoring the blood pressure of the user;  
a microprocessor for receiving blood pressure information from the vital-sign monitor and motion information from the motion sensor, the microprocessor distinguishing between blood pressure information received during localized motion of the user and during localized rest of the user; and  
a wireless transceiver for transmitting blood pressure information from the microprocessor.

**[Claim 2]** 2. The device according to claim 1 wherein the motion sensor is an accelerometer, a piezoelectric device or a mercury switch.

**[Claim 3]** 3. The device according to claim 1 wherein the motion sensor is a software algorithm that analyzes information from the vital-sign monitor to determine motion.

**[Claim 4]** 4. The device according to claim 3, wherein the software algorithm is compiled computer code operating on the microprocessor.

**[Claim 5]** 5. The device according to claim 1 wherein the wireless transmitter is a short-range wireless transmitter operating a wireless protocol based on BLUETOOTH, Zigbee, part-15, or 802.11.

**[Claim 6]** 6. The device according to claim 1 further comprising a bracelet for housing the motion sensor, the microprocessor and the wireless transmitter.

**[Claim 7]** 7. The device according to claim 6 further comprising a finger-mounted component for housing the vital sign monitor.

**[Claim 8]** 8. The device according to claim 1, further comprising an optical module comprising a light source and a photodetector.

**[Claim 9]** 9. The device according to claim 8 wherein the optical module is in communication with a pulse-oximetry circuit.

**[Claim 10]** 10. The device according to claim 8 wherein the blood pressure information is a time-dependent optical waveform.

**[Claim 11]** 11. The device according to claim 1 further comprising an analog-to-digital converter in communication with the motion sensor, the vital sign monitor and the microprocessor.

**[Claim 12]** 12. A method for monitoring an user's blood pressure, the method comprising:

determining if the user's hand is at rest or in motion;

signaling a vital signs monitor to generate blood pressure information if the user's hand is determined to be at rest;

sending the blood pressure information to a microprocessor for processing to generate a blood pressure signal for the user; and

wirelessly transmitting the blood pressure signal for the user to a computer or handheld device.

**[Claim 13]** 13. The method according to claim 12 wherein determining if the user's hand is at rest comprises monitoring a signal sent from a motion sensor to the microprocessor to determine if the user's hand is at rest or in motion.

**[Claim 14]** 14. The method according to claim 13 wherein the motion sensor is an accelerometer, and the accelerometer is in communication with the microprocessor.

**[Claim 15]** 15. The method according to claim 13 wherein the motion sensor is a piezoelectric device or a mercury switch, in communication with the microprocessor.

**[Claim 16]** 16. The method according to claim 12 wherein the motion sensor is a software algorithm that analyzes information from the vital-sign monitor to determine motion.

**[Claim 17]** 17. The method according to claim 12 wherein the blood pressure signal for the user is wirelessly transmitted using a radio-frequency transmitter operating a wireless protocol based on BLUETOOTH, Zigbee, part-15 or 802.11.

**[Claim 18]** 18. A device for real-time monitoring of an user's vital signs, the device comprising:

- means for detecting an absence of motion of the user's limb;
- means for generating an activate signal when an absence of motion is detected by the detecting means;
- means for activating a vital sign monitor;
- means for generating a vital sign signal corresponding to the blood pressure and pulse oximetry of the user;
- and
- means for transmitting the vital sign signal to a computer or handheld device.

**[Claim 19]** 19. A system for wirelessly monitoring an user's blood pressure, the system comprising:

- a monitoring device, the monitoring device comprising
  - a motion sensor for monitoring localized motion of the user,
  - a vital signs monitor for monitoring the blood pressure of the user,
  - a microprocessor for receiving blood pressure information from the vital sign monitor and motion information from the motion sensor, the microprocessor distinguishing between blood pressure information received during localized motion of the user and during localized rest of the user and
  - a short-range wireless transceiver for transmitting blood pressure information from the microprocessor; and
- a handheld device comprising a wireless transceiver that operates on a network.

**[Claim 20]** 20. A device for wirelessly monitoring a user's heart rate, the device comprising:

- a finger-mounted module comprising a monitor for monitoring the heart rate of the user;

a wrist-mounted module comprising  
a motion sensor for monitoring localized motion of the user,  
a microprocessor for receiving heart rate information from the finger-mounted module and motion information from the motion sensor, the microprocessor distinguishing between heart rate information received during localized motion of the user and during localized rest of the user, and  
a wireless transceiver for transmitting heart rate information from the microprocessor; and  
means for communicating from the finger-mounted module to the wrist mounted module.

**[Claim 21]** 21. The device according to claim 20 wherein the finger-mounted module comprises a light source and a photodetector.

**[Claim 22]** 22. The device according to claim 20 wherein the motion sensor is an accelerometer, a piezoelectric device or a mercury switch.

**[Claim 23]** 23. The device according to claim 20, wherein the motion sensor is a software algorithm that analyzes information from the finger-mounted module to determine motion.

**[Claim 24]** 24. The device according to claim 20 wherein the short-range wireless transmitter is a radio-frequency transmitter operating a wireless protocol based on BLUETOOTH, Zigbee, part-15, or 802.11.